

WHAT IS CLAIMED IS:

1. A printed circuit board assembly including:
 - a first circuit board having a first device side, the first device side having a first portion configured to mount a first plurality of semiconductor devices;
 - a second circuit board having a second device side, the second device side having a second portion configured to mount a second plurality of semiconductor devices, the second circuit board disposed in confronting parallel relationship to the first circuit board; and
 - a border interposed between the first and second boards and disposed around the respective first and second portions, the border element cooperating with the first and second boards to form a liquid-tight container, the border formed with an inlet to receive an electrically nonconducting liquid and an outlet for discharging the liquid.
2. A printed circuit board assembly wherein the first and second circuit boards comprise channel cards for use in a semiconductor tester.
3. A printed circuit board assembly wherein the border comprises:
 - a border element having a thin metallic wall of a uniform height and respective top and bottom sealing edges; and
 - respective first and second seals disposed between the top and bottom sealing edges and the first and second device sides.
4. A printed circuit board assembly wherein the first and second printed circuit boards have devices mounted solely on the first and second device sides.

5. Automatic test equipment including:
a computer workstation; and
a testhead adapted for being carried by a manipulator, the testhead
including a plurality of printed circuit board assemblies, each of the plurality of circuit
5 board assemblies including

a first circuit board having a first device side, the first device
side having a first portion configured to mount a first plurality of semiconductor
devices;

10 a second circuit board having a second device side, the second
device side having a second portion configured to mount a second plurality of
semiconductor devices, the second circuit board disposed in confronting parallel
relationship to the first circuit board; and

15 a border interposed between the first and second boards and
disposed around the respective first and second portions, the border cooperating with
the first and second boards to form a liquid-tight container, the border formed with an
inlet to receive an electrically nonconducting liquid and an outlet for discharging the
liquid.

6. Automatic test equipment according to claim 5 wherein the border
comprises:

a border element having a thin metallic wall of a uniform height and
respective top and bottom sealing edges; and

5 respective first and second seals disposed between the top and bottom
sealing edges and the first and second device sides.

7. Automatic test equipment according to claim 5 wherein the first and
second printed circuit boards have devices mounted solely on the first and second
device sides.

8. A method of cooling a plurality of electronic devices, the method including the steps:

mounting the electronic devices on confronting sides of a pair of printed circuit boards, the circuit boards placed in a parallel stacked relationship;

5 interposing a border between the circuit boards and around the electronic devices, the border cooperating with the boards to establish a liquidtight container; and

immersing the electronic devices into an electrically nonconducting liquid inside the container.